



MEWP Emergency Lowering Types

Ever thought “what do I do if I’m stuck up in the air”?



Or could I bring someone down if they were stuck in the air?

Read on!

With the continued growth of the powered access industry there are now many manufacturers and machine types. Operating and emergency lowering systems can vary significantly from machine to machine. The following information provides examples of the four main types of emergency lowering systems.

Mobile elevating work platforms (MEWPS) must always have operator’s manual available with the machine. Inside the manual will be clear instructions on how to use the machines emergency lowering system in the event of an emergency. In all the examples shown below it is imperative that manufacturers operating and emergency lowering instructions are followed.

Work at height should always be properly planned, carried out in a safe manner and include the selection of the most appropriate equipment for the task to be undertaken. There should also be a provision for emergencies and rescue arrangements in place (Rescue Plan) as per Australian Standard AS2550.10. 1.6 (f).

When operating MEWP’s always ensure the ground controls/emergency lowering system can be accessed if parked close to a structure.

It may be too late to find out when the emergency controls are needed – make sure you know how operate them beforehand!



Emergency lowering systems are intended for use in the event that the main power supply fails e.g. Loss of fuel. If the power supply is available use the lower controls. Before attempting to lower the platform always check to see that the lowering path is clear of obstructions.

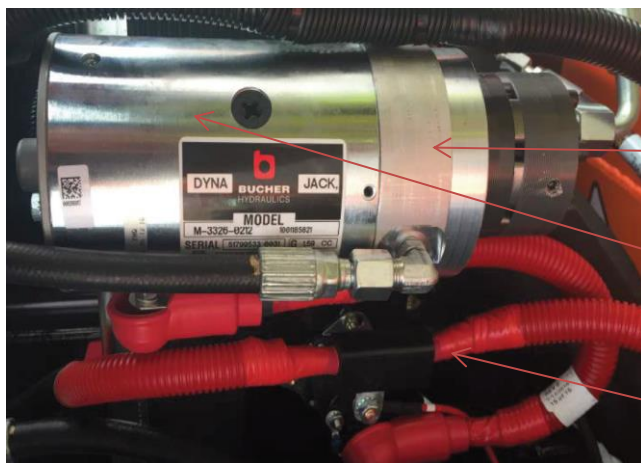
There are 4 main types of emergency lowering systems fitted to MEWPS

1. Auxiliary Power Motor (APU)
2. Emergency lowering cable
3. Hand pumps
4. Bleed down valves

The pictures shown below are examples of emergency lowering systems fitted to MEWPS. Please note different manufacturers will have their own version.

Auxiliary Power Units

Auxiliary Power Units (APU's) are fitted to boom and scissor type platforms. The APU consists of an electric motor which is powered by the machines battery connected to a small hydraulic pump. When the motor is energised it in turn activates the hydraulic pump which provides hydraulic pressure to machines system. The controls for the APU will be fitted at the base and platform controls and should only be used in the event of the machines main power source failing.



Hydraulic Pump

Electric motor

Power cables

To activate the emergency power, press and hold this switch in the down position and operate the boom function switches.





Platform up

Auxiliary power

Auxiliary down
lowering switch

Function enable

Platform down



Auxiliary power
switch



Auxiliary power switch



Emergency Lowering Cable

Emergency lowering cables are normally fitted to scissor lifts, although some scissor lifts are fitted with APU's. The cable is positioned at the base of the machine with the handle normally protruding by the access steps to the platform or on the side of the unit. Operators of scissor lifts should ensure that the cable handle is accessible to activate in the event of an emergency. In the event of the main power source failing the competent person pulls the handle at the base of the machine which in turn activates the manual lowering valve. The scissor will then lower to the base. Always check that the path is free from obstructions and that the extension deck is fully retracted.

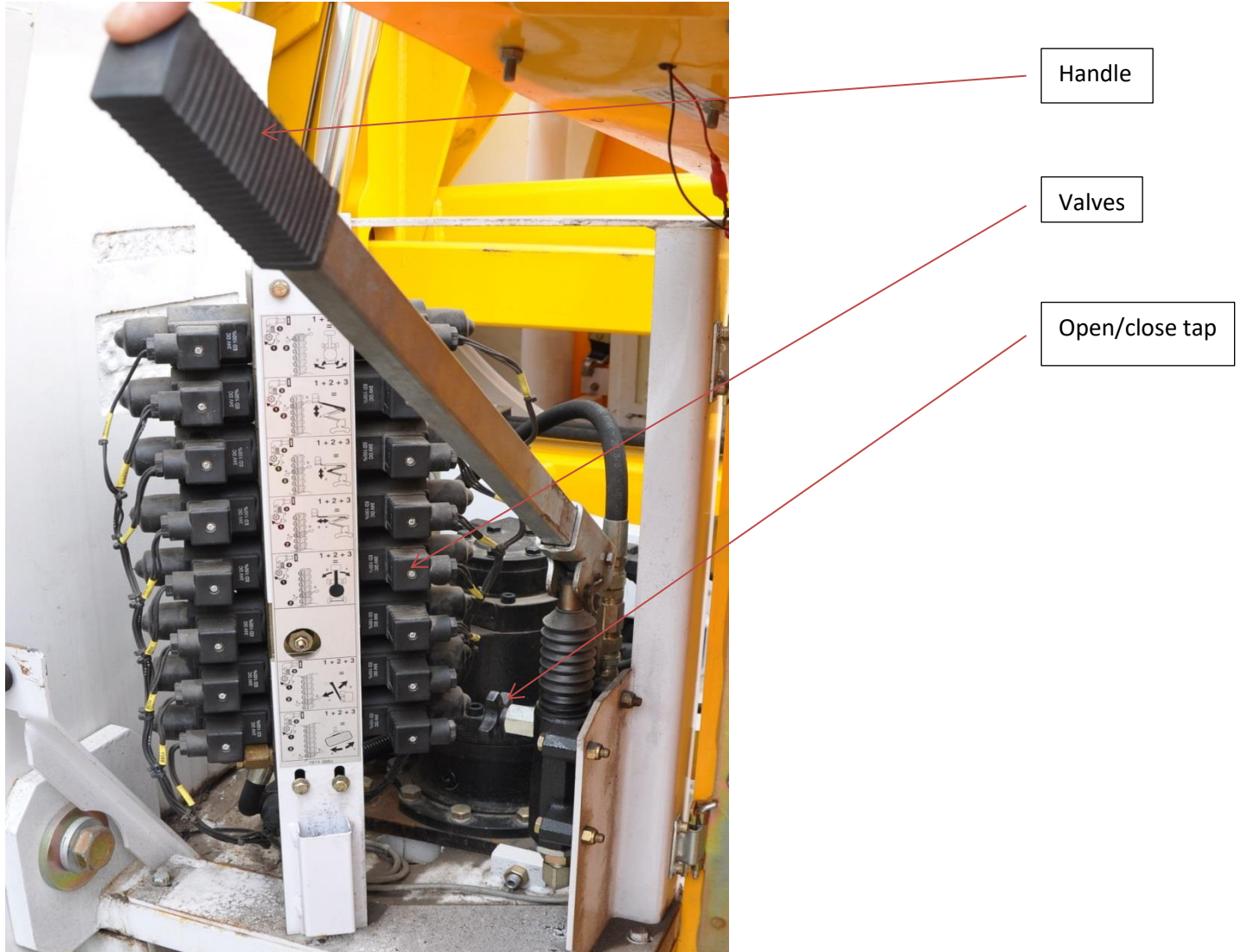


Three different types of manufacturer's machines shown here but the principal is still the same on all. Pull handle to lower the platform. Great care must be taken to avoid collision or crushing as the platform lowers.





Hand pumps can be fitted to both scissor and boom type platforms at the base of the machine, including trailer lifts and truck mounted platforms. In the event of the main power source failing the hand pump is activated manually. Manufacturers operating instructions should always be followed.



Locating pin fits into valve here

As the diagram shows, by closing the tap and inserting the locating pin into the correct valve and then pumping the handle, it will raise or lower the secondary boom in this case



Bleed Down Valves

Bleed down valves are fitted to many different types of powered access equipment. They are normally operated by activating a plunger which is located on the cylinder. When using these valves, beware of crushing hazards as the boom lowers and always reset the valve after use!



Lowering instructions
decal

Plunger



**EMERGENCY LOWERING
PROCEDURE**
Check for obstructions, then
push RED knob slowly until
boom JUST starts to descend.
STAY CLEAR OF STRUCTURE
DURING DESCENT



The picture shown below comes from a “Spider Lift” type machine fitted with tracks.

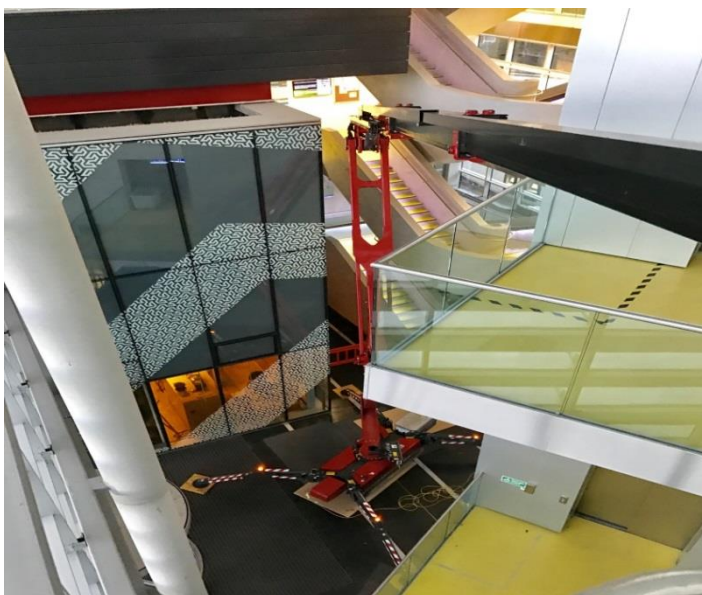


APU activation button for boom down only. Important that boom is telescoped in and jib is down before lowering

Boom lowering switch.

Boom slew, tele in and jib down switches

APU activation button for boom functions i.e. telescope in, slew and jib down.



The picture on the left highlights the need for correct function selection whilst lowering from platform and ground controls.



1. Always refer to the manufacturer's instructions for the emergency lowering procedure on the machine you are using.
2. If the manual is not with the machine you should not begin daily operations. Most manufacturers have websites where you can download manuals free of charge.
3. Machines are not the same and will differ in the type and complexity of emergency lowering system fitted.
4. Make sure you prove the emergency lowering system is working before you start to operate the machine.
5. Record your pre use inspection in the Log Book.
6. As part of your rescue plan always ensure there is someone at ground level who has been familiarised and is competent with the emergency lowering procedure

So what is a Rescue Plan?

Australian Standard AS2550.10 Section 1.6 (f) states the requirement for emergency and rescue procedures **before** any MEWP operations are carried out.

Consider the following points in your rescue plan:

- What type of emergency lowering system is fitted to your machine?
- Where are the emergency lowering controls and the instructions on use?
- Who is going to use them and do they know how to?
- Are the emergency lowering controls accessible when the MEWP is in use?

Examples when a rescue plan is relied upon:

- Operator incapacitated
- Failure of platform controls whilst elevated
- Overloading where load cannot be removed from platform
- Operator ejected and suspended in their harness

Note: Great care must be taken on any of the following situations:

- If the MEWP has malfunctioned or a fault developed where platform, ground and emergency lowering controls are not functioning expertise must be sought e.g. Service Technician, consultation with hire company.
- If the machine is close to distribution or transmission lines
- MEWP has become unstable and is at risk of tip over from any movements
- Trapping or crushing where operator or MEWP is entangled

Developing a Rescue Plan - Considerations

- Trained operator
- Competent person at ground position who has been familiarised with the machines controls and emergency lowering procedures.
- Appropriate supervision
- Communication systems
- Is information available? Who and how will it be communicated?
- Emergency phone numbers
- Site address
- Directions and access for ambulance/fire vehicle or other emergency services
- MEWP basket to basket rescue (last resort, great care must be taken in this situation)



An operative who has suffered a fall and is suspended in his harness is a true medical emergency. Just because they are hanging in a harness doesn't mean you have all day to perform the rescue. Rescue has to be planned, practiced and performed quickly and effectively. Operators who are suspended in a harness can be subject to "Suspension Trauma" (refer to Australian Resuscitation Council).

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